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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,552	05/13/2004	Ching-Hua Chen	LKSP0033USA	3551
27765	7590	05/18/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION			GEORGE, PATRICIA ANN	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	

1765  
DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/709,552

Applicant(s)

CHEN ET AL.

Examiner

Patricia A. George

Art Unit

1765

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 3/31/06 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): 35 USC 112 2<sup>nd</sup> IP  
6. ☒ Newly proposed or amended claim(s) 1,5,6 would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: 1,5,6  
Claim(s) objected to: \_\_\_\_\_  
Claim(s) rejected: 7,9-15  
Claim(s) withdrawn from consideration: \_\_\_\_\_

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See attachment  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_  
13. ☒ Other: SEE NOTICE OF REFERENCES CITED

**NADINE G. NORTON**  
**SUPERVISORY PATENT EXAMINER**

## **ADVISORY ACTION**

### ***Response to Arguments***

Applicants amendment filed 3/31/06, was received and filed.

Applicants amended claims 1 and 7 to successfully overcome the 35 USC 112, second paragraph rejection, presently withdrawn.

Applicants argue, on page 6, that the reference of Huang is used to detect a complete metal layer whereas the instant invention is used to detect a particles.

Examiner responds that the reference of Kern, not Huang, was provided (see page 3 of office actions dated 8/11/2005 and 2/07/2006) to teach examination methods (SIMS or TXRF) which monitors impurities, such as residue or particles (i.e. particle detection), and elimination. See pages 417-418, 569 and 161 provided with this action.

Applicants argue, on page 6, that the examination procedure of claim 7 is used to detect particles which deteriorate the electric performance of the contact plug to be formed.

Examiner responds that detecting particles which deteriorate the electric performance of the contact plug to be formed, is not commensurate with the scope of the claim language.

Examiner agrees with applicant's argument that their layer a via is one a critical layer, but examiner strongly disagrees with applicant's perception that the layer of Huang's procedure is relatively less important, as a metal layer, examiner finds metal layers to be equally critical to vias, contacts, gate oxides, and others. It is well known

that some of the manufacturing layers of semiconductor devices are classified as critical layers, this list includes contacts, vias, and metal layers, to name a few.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia (Patty) George whose telephone number is (571)272-5955. The examiner can normally be reached on weekdays between 7:00am and 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia A George  
Examiner  
Art Unit 1765

PAG  
0406



NADINE G. NORTON  
SUPERVISORY PATENT EXAMINER

